REMARKS

A Request for Continued Examination Under 37 CFR 1.114 is accepted. Applicants' submission filed on March 5, 2003 has been entered.

Claims 1-18 are pending in this application.

Claim 19 is added. Support can be found for new claim 9 in the specification, page 10, lines 23-24. No new matter is added.

Claim Rejections - 35 U.S.C. § 103.

Claims 1-3, 5, 7, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,835,334 to McMillin et al. ("McMillin").

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillin.

Claims 8, 9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillin in view of U.S. Pat. No. 5,645,646 to Beinglass et al. ("Beinglass").

Independent claims 1 and 9 both recite that the ceramic plate is not fastened to the heater. As to this point, in the office action, page 3, lines 1-6, the examiner admitted that McMillin does not teach the ceramic plate that is not fastened to the heater but asserted that it would have been obvious to one of ordinary skill in the art not to fasten the ceramic plate to the ceramic heater in McMillin considering a motivation to provide rapid servicing of the ceramic heater.

Applicants disagree. The examiner cited neither a motivation nor a suggestion in the prior art references suggesting the ceramic plate not fastened to the ceramic heater, and therefore, the above assertion is not well supported. Moreover, the Examiner impermissibly finds his motivation to combine the reference as not in either reference but in applicants' teachings in the present application engaging in hindsight reconstruction.

Further, we would like to point out that an important feature of the electrostatic chuck of McMillin is to use coolant (or heat conductive) gas and liquid as defined in claim 1 thereof, for example, to actively control the temperature of the electrodes and the wafer. In order to effectively use the coolant gas, it is necessary to prevent the coolant gas from leaking through the interface between the electrode cap 1 and the lower electrode 2, which may correspond to the ceramic plate and the heater, respectively, of the present invention. To achieve the end, a preferred embodiment of the electrostatic chuck of McMillin not only fastens the electrode cap 1 to the lower electrode 2 but also provides O-ring seals 9 between the electrode cap 1 and the lower electrode 2 (column 4, lines 61-64). It is apparent that if the

electrode cap 1 and the lower electrode 3 are not fastened to each other, the leakage of coolant gas through the interface therebetween would undesirably increase and thus, it would not have been obvious to a person having ordinary skill in the art not to fasten the electrode cap 1 to the lower electrode 2 in the electrostatic chuck of McMillin in accordance with McMillin's cxpress and necessary teachings which contradict applicants' claimed invention

Beinglass does not disclose nor indicate a plate covering the heater.

Applicants submit that independent claims 1 and 9 are patentable distinct over the references cited. Other claims depend from either claim 1 or claim 9, and thus should be allowed for at least the same reasons as those discussed above regarding claims 1 and 9.

Regarding the added claim 19,applicants further point out that the electrostatic chucks as disclosed in McMillin are to be used in the low-pressure environments, a typical pressure of which is less than about 100 mtorr. This necessitates the coolant gas such as He to be introduced to the backside of the wafer with a relatively high pressure such as 2 Torr (column 6, lines 30-31) so that the heat can be conveyed between the wafer and the electrode cap 1 via the coolant gas. In such low pressure environments, it is also necessary to closely fasten the electrode cap 1 and the lower electrode 2 to effectively convey the heat the heat therebetween because the low-pressure gas which may exist between the electrode cap 1 and the lower electrode 2 can little contribute to the heat conductance therebetween and most of the heat conductance is achieved through direct contact between the electrode cap 1 and the lower electrode 2. Therefore, in this point of view also, it would not have been obvious to a person having ordinary skill in the art *not* to fasten the electrode cap 1 to the lower electrode 2 in the electrostatic chuck of McMillin. In order to clarify this point, the added claim 19 stipulates that a pressure in the process vessel is controlled in a range of 0.5 torr to 10 torr, which is significantly higher than the pressure at which the electrostatic chuck as disclosed in McMillin may be used. Support can be found for new claim 9 in the specification, page 10, lines 23-24.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-19 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.

James G. Stewart
Reg. No. 32,496

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
503-222-3613
Customer No. 20575

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Date: August 29, 2003

Judy Wigmore